Remarks

Claims 1-38, 44-48, 50, 53 and 54 are pending in the application. New claims 54 and 55 have been added.

Applicant thanks the Examiner for kindly allowing claims 1-12, 27-37, 44-46, 48 and 50 and indicating that claim 17 would be allowable if rewritten in independent form.

Applicant also wishes to point out that the Listing of the Claims submitted with the Amendment dated January 28, 2004, contained an inadvertent clerical error in claim 38 in which the last few words of claim 38 were repeated. The Listing of the Claims included herein reflects the fact that claim 38 was previously amended, i.e., claim 38 is marked with the status identifier "Previously amended," and deletes the repetitious language, "said channel, said adhesive composition comprising polyurethane." No claims are currently amended.

Applicant further wishes to point out that although claim 49 was cancelled in the Amendment dated January 28, 2004, the Listing of the Claims attached thereto did not reflect the cancellation of claim 49. The claim set included herein reflects the fact that claim 49 was cancelled. New claim 54 is original claim 49.

Claims 13-16, 21-26, 38, 47 and 53 stand rejected under 35 U.S.C. § 102(b) over Brunnhofer (U.S. Patent 6,035,596).

Brunnhofer discloses a heat-insulating connecting profile used around a window, door, or façade panel (column 1, lines 5-8). An IR reflective layer is disposed in the profile. The IR-reflective layer is a foil (column 1, lines 66-67 to column 2, lines 1-2). The foil includes a layer of metal or metal oxide disposed between two polymer film layers. The polymer layers of the foil are laminated together by a polyurethane adhesive (column 2, lines 32-45).

Claim 13 is directed to a thermal barrier assembly including a channel, a layer of metal bonded to a surface of the channel, the metal having been deposited on the channel surface from a plasma to form a modified surface. For an invention to be anticipated under 35 U.S.C. § 102(b) over a cited reference, the reference must teach each and every element of the claimed invention. *Verdegaal Bros., Inc., v. Union Oil Co.*, 814 F.2d 628, 631 (Fed. Cir. 1987). If even one element is missing, anticipation is not established.

Atlas Powder Co. v. E.I. du Pont De Nemours & Co., 750 F.2d 1569, 1574 (Fed. Cir. 1984). The assembly of claim 13 is distinguishable over Brunnhofer regardless of the manner in which the metal layer is deposited, because Brunnhofer does not teach a metal layer bonded to a surface of a channel as required by claim 13. The Office action takes the position that element 7 of Brunnhofer is a channel and that the foil 9 is a metal layer. The foil 9 of Brunnhofer is not bonded to the channel 7 of Brunnhofer. Instead, the foil 9 is seated in grooves 11 in the plastic insulating strip 4 of Brunnhofer through the mechanical means of a bead cord 12. Thus, Brunnhofer does not teach a metal layer bonded to a surface of a channel of thermal barrier assembly. Brunnhofer thus lacks a required element of claim 13. Accordingly, Applicant submits that the rejection of claim 13 under 35 U.S.C. § 102(b) is over is unwarranted and cannot be maintained.

Claims 14-16, 21-26, 38, 47 and 53 are distinguishable under 35 U.S.C. § 102(b) over Brunnhofer for at least the same reasons set forth above in distinguishing claim 13. Accordingly, the rejection of claims 14-16, 21-26, 38, 47 and 53 under U.S.C. § 102(b) over Brunnhofer cannot stand and must be withdrawn. Claims 14, 16, and 22-24 are further distinguishable over Brunnhofer for at least the following additional reasons.

Claim 14 depends from claim 13 and further recites that the assembly further includes an adhesive composition bonded to the modified surface of the channel. Brunnhofer does not teach an adhesive composition bonded to a modified surface of the channel. The only adhesive composition disclosed in Brunnhofer is an adhesive composition in the foil laminate. The adhesive composition of the foil laminate of Brunnhofer is not bonded to the channel of Brunnhofer, let alone a modified surface of the channel.

Claim 16 depends from claim 14 and further requires the adhesive composition to exhibit no greater than 5 % shrinkage when bonded to the surface and subjected to the % Shrinkage Test Method. Brunnhofer does not teach anything about the shrinkage of the adhesive composition. To the contrary, to the extent Brunnhofer discusses shrinkage it is with respect to a foil, not an adhesive composition. In particular, Brunnhofer discloses a foil having a shrink capacity of at least 5%, preferably 10%, at 100°C (column 3, lines 43-46). Brunnhofer thus fails to teach the assembly of claim 16. Accordingly, the

rejection of claim 16 under 35 U.S.C. § 102(b) over Brunnhofer thus is unwarranted and cannot stand.

Claim 24 depends from claim 13 and recites that the channel is defined by a substrate that includes a polymer. The channel 7 of Brunnhofer cited by the Office action is not defined by a substrate that includes polymer. To the contrary, the channel 7 of Brunnhofer is defined by an aluminum substrate. Thus, Brunnhofer lacks a required element of claim 24. For at least this additional reason the rejection of claim 24 under 35 U.S.C. § 102(b) over Brunnhofer is unwarranted and cannot stand.

Original claim 49 (new claim 54) stands rejected under 35 U.S.C. § 102(b) over Brunnhofer (U.S. Patent 6,035,596).

Claim 54 is directed to a thermal barrier assembly including a first structural component, a second structural component, a channel disposed between the first structural component and the second structural component, a layer of metal bonded to a surface of the channel, the metal having been deposited on the channel surface from a plasma, and an adhesive composition disposed in the channel, the first structural component being bonded to the second structural component through the adhesive composition. Brunnhofer does not teach a layer of metal bonded to the surface of a channel disposed between two structural components. The Office action takes the position that the foil 9 of Brunnhofer is bonded to the channel 7. However, this is not the case. As established above with respect to claim 13, the foil 9 of Brunnhofer is seated in grooves 11 in the plastic insulating strip 4 of Brunnhofer through the mechanical means of a bead cord 12. Thus, Brunnhofer does not teach a metal layer bonded to a surface of a channel of thermal barrier assembly. Brunnhofer thus lacks a required element of claim 54. Accordingly, the rejection of claim 54 (original claim 49) under 35 U.S.C. § 102(b) over Brunnhofer is unwarranted and cannot stand.

Claims 18-20 stand rejected under 35 U.S.C. §103(a) over Brunnhofer (U.S. Patent 6,035,596).

Claim 18 depends indirectly from claim 13 and requires the adhesive composition to exhibit a shear strength of at least 2500 psi at room temperature after being subjected to the Thermal Cycling Method. As established above with respect to claims 13 and 14, Brunnhofer does not teach a metal layer bonded to a channel of a thermal barrier

assembly and further fails to teach an adhesive composition bonded to the modified surface of the channel. Therefore, Brunnhofer lacks a required element of claim 18. Accordingly, a *prima facie* case of obviousness of claim 18 under 35 U.S.C. 103 over Brunnhofer has not been established, and the rejection thereof must be withdrawn.

Moreover, when obviousness is based on a single prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of that reference. See *B.F. Goodrich Co. v. Aircraft Braking Sys. Corp.*, 72 F.3d 1577, 1582, 37 U.S.P.Q.2d 1314, 1318 (Fed. Cir. 1996). Nothing in Brunnhofer teaches or suggests bonding a metal layer to the channel of a thermal barrier or bonding an adhesive composition to a modified surface of the channel. Therefore, the skilled artisan would have no reason to *sua sponte* modify the profile Brunnhofer so as to achieve the thermal barrier assembly of claim 18.

Furthermore, nothing in Brunnhofer teaches or suggests how to achieve a thermal barrier assembly in which the adhesive composition exhibits a shear strength of at least 2500 psi at room temperature after being subjected to the Thermal Cycling Method. Contrary to the statements in the Office action, the test for determining shear strength measures the nature of the bond of the adhesive composition to the channel of the thermal barrier assembly. There is nothing in Brunnhofer that teaches or suggests how to achieve a thermal barrier assembly in which the adhesive composition exhibits a shear strength of at least 2500 psi at room temperature after being subjected to the Thermal Cycling Method. Accordingly, the rejection of claim 18 under 35 U.S.C. § 103(a) over Brunnhofer cannot stand and must be withdrawn.

Applicant submits that claims 19-20 are distinguishable under 35 U.S.C. § 103(a) over Brunnhofer for at least the same reasons set forth above in distinguishing claim 18, and requests that the rejection of claims 19-20 under 35 U.S.C. § 103(a) over Brunnhofer be withdrawn.

The claims now pending in the application are in condition for allowance and such action is respectfully requested. Should the next action be other than a Notice of Allowance, Applicant respectfully requests a teleconference interview.

Please charge any additional fees owing or credit any over payments made to Deposit Account No. 06-2241.

Respectfully submitted,

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